VIDEO 1

Lily: You know how sometimes if you drop something that's maybe porcelain or glass, how it breaks into tiny little pieces? That's kind of like water. If it rises up, then it can't be this huge, gigantic puddle that always rises up. It has to bring it up in tiny little pieces. So you can't, maybe with wood or tar or something like maybe oil or something, you can't just take the whole thing up and bring it up all at one time. You have to break it into tiny little pieces, and then bring it up. Because it's going to make it a whole lot easier. And it also would be kind of strange to see this huge gigantic puddle just floating in the air.

VIDEO 2

Carolyn: Because now I have another puzzle then, explain this to me: This is my drink, I just got it. When you went to lunch, I went and got it. It has ice in it, but it has water on the outside of it. Why?

Mariah: Because you know like when we sweat, it's like that, but it's just something, it's like a sweat for a drink. Because it's so cold that it just like. It makes water.

Carolyn: So Mariah says the drink is sweating. [laughter] Just like us. What do you think, Alex, do you agree with Mariah?

Alex: No. I said that ice evaporating and making tiny drops of water.

Carolyn: So it's the ice, I'm writing all these down, these are really interesting thoughts. Ice melting and evaporating, is that what you said?

***Break***

Winston: All of the people saying the ice was doing it, it does not make sense to me, because I never get ice in my soda, because I don't drink it fast enough, and the ice melts, and then it waters down the soda and it doesn't taste good. But the same water thing happens on my soda.

Carolyn: So even if you don't have ice in it, you get that same watery effect on the outside? So guess what then, does that blow this one out of the water? That one doesn't work. It can't work, because he just said it happens, Alex, even if he doesn't have ice. So what's happening? Yes, cold water.

Mariah: Anything cold, like it might have had ice in it, and then the ice melted, and then you wiped off the cup. And then a few minutes later you saw like something. Anything cold you fill it up, gets the little droplets on it.

Carolyn: So Mariah's saying anything cold gets the water on the outside. But what?

Cameron: I don't really get how it gets on the side of the bottle. I have this [inaud] bottle where the bottle has a cap itself, and then on the outside it has another rubber cover. So how does the water get right through that?
Carolyn: So you're having a hard time going, 'How can it get through something?' So here's what I want you to do: In your groups right this second, I want you to think about all the things we've talked about so far. Can anything that we've talked about prior to today help explain why there's water on the outside of my cup, on the outside of Cameron's cup when he says he's got a lid on it, that it can't go through. How is it getting there? That's your job right this second in your small groups. Go!

**VIDEO 3**

Alex: Chloe's thinking that the moisture that's around us, it's collecting up to the moisture [inaud]. It's collecting up to the cup and making the water droplets outside of the cup.

Carolyn: So Chloe, what do you think it is that's making the water around us attract to the cup?

Chloe: If there's not, because you know there is the tin ones that's inside, and they're not all bunched together, they'll just go and kind of move, the moisture would choose a bottle and stick to it. And then, it just kind of collects around it, it's like one cold spot.

Carolyn: And where's the moisture coming from?

Dante: The outside, I think kind of like the same idea but a different explanation. I was thinking of, it gets too cold, and the moisture in the air, the coldness collects it, and then it makes little water drops.

Carolyn: It kind of goes, 'I'm over here, I'm over here, water, come get me'?

Dante: Well, not like that, but like it comes to it.

Carolyn: So it attracts to it? So it's going to attract to this cup?

Dante: It isn't cold.

Chloe: It doesn't have any water in it.

***Break***

Carolyn: So what are we thinking over here?

Kelly: We're thinking that, you know the idea that moisture in the soda is mixing with moisture from the air.

Winston: It's like attracted to the cold soda and it's trying to get to it, and then it's like sticking on.

Carolyn: So it's the moisture in the air that's sticking to it? So what causes the attraction?

Winston: The coldness, the cold soda.

**VIDEO 4**

Carolyn: So can we cross out the drink sweating?
Class: No. Yeah.
Carolyn: Cameron, you said no, why?
Student: Because drinks don't sweat. It's not like.
Cameron: I think it's not really called 'sweating,' but it's just like [inaud].
Carolyn: He's telling me that there's little microscopic tiny holes.
Cameron: There probably is, but people say stuff is air-tight. But like I had a soccer ball and I blew it up too much, and I left it in my really warm car, and it exploded. So then if it expands in the warm air, I guess it condenses in cold air, so maybe it could get to the microscopic holes if it's cold. Because if you do it with warm water, it doesn't really work.

***BREAK***

Karin: I sort of disagree, in your cup, what are you drinking?
Carolyn: Diet Coke.
Karin: Then why are, the people are saying that it comes out in little microscopic cracks, why isn't it brown? Because I don't think that Diet Coke is clear.
Carolyn: She says those of you that are thinking it's the drink sweating, or it's seeping out, she says it's not brown.

VIDEO 5

Carolyn: Go for it. How did we get there, Lauren? How did we go from this puddle, to my cup here with water on the outside? How did we get from here to here? Start thinking.

***BREAK***

Karin: I'm thinking that it went from the puddle, and then we cleared up that we decided it would go up. And then we started bringing up the thing about the mirrors, and how they get foggy and what's happening with that. And at the same time, it was our experiment how it fogged up the classroom.
Carolyn: So is there a correlation, is there something that relates in them?
Karin: And they sort of both are coming out of the water, almost. It's the water coming out of something. And then we sort of agreed partially that it was the air. And then with our cup, we brought it back up, the air thing, about how the moisture from the air and the coldness of the cup attracted each other. So maybe the cup idea originally came from joining the air in the shower part.
Carolyn: So start playing with that. I have a lot of good ideas coming up.

***BREAK***
Carolyn: Oh, wow! I didn't pick up yours. Wow, I'm going to share this with you. I have a picture. Analise isn't here, I picked it up. She drew a puddle, she put an arrow. She's got a circle that shows inside of it a bunch of little circles, and she wrote, 'Water droplets mist.' And then she wrote, 'Foggy windows.' And then she wrote, 'Shower steam moisture.' And then she wrote, 'Equals cup with water.' What is she thinking?

Cameron: More ideas equal more ideas equal more ideas.

Carolyn: But stop and think of this. This is really interesting to me. She did this. She did puddle. We'll ignore it's in a circle, but she did this. [mist] I've got her book.

***Break***

Carolyn: So my question is, what are her thoughts? If I look at all that, what is she saying? What is she saying? Griffin, what do you think she's saying?

***Break***

Carolyn: Tell me how those ideas spun? How did they come about? And what do they tell us? And where can we go because of them? Alex, what do you think? You can go up there and use the chart, if you want.

Alex: I think she got there by, her puddle, she thought it was turning into mist. And the mist is moisture. And the moisture is water, so she thinks it will make a cup of water.

Carolyn: Did she? Because look it up where she's going. And I wrote cup with water on it, not cup with water in it. She didn't verify it, but that's what I wrote. So what do you think?

Alex: I think that moisture that she's talking about, just connects to the cup, it just finds the cup, it just goes, it's just going around and just finds a cup.

Carolyn: Where did the moisture that found the cup come from?

Alex: It came from just, where is it, her pot.